

The statement about mother's milk being best is a hand-me-down from a generation ago, when it was irrefutably true. At that time, nutritional requirements of infants were not definitely understood, and production of *safe* cow's milk was an unknown endeavor.

In those days all cow's milk was to be regarded as contaminated, and breast milk, even the poorest, was at least safe.

The chief difficulty in breast feeding is the extreme variability in quantity and quality from week to week, day to day, and even feeding to feeding. Physical and nervous factors influencing the mother rob her of consistency. Milk from "contented mothers" would undoubtedly be superior; but what mother today can remain placidly at work making milk while from early morning till late at night she is being bombarded by upsetting influences? She quarrels with her husband at breakfast; the mail brings worrisome bills; mother-in-law comes in and tells her she is making a mess of raising the baby; the baby cries for hours. Contentment? Another present-day rarity. So at best we can know only, in a general way, how much and what kind of milk a baby is getting from the breast, while a formula is an accurate certainty.

There is little use in laboratory testing of breast milk. The best laboratory is the baby. If the baby does well, the food is suitable, and vice versa.

The hardest job is to feed infants who are on part breast and part supplementary, into which class most fall at one time or another.

It is quite reasonable to modify the old statement to read: "The mother's own milk is to be given a fair trial first, on the assumption that if it is of good quality and quantity, it is best for the baby." But, if after a reasonable trial, trouble continues, it need not be felt that the baby's best interests are being violated by substituting a formula of known and consistent quality and quantity, compounded to meet accurately the individual needs of the particular baby in question.

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DIAGNOSIS AND TREATMENT OF NON-PROSTATIC OBSTRUCTIONS OF THE LOWER URINARY TRACT

The differential diagnosis and treatment of urinary retention due to obstructions of the lower urinary tract, from causes other than prostatic hypertrophy, are of great interest. Congenital obstructions of the lower urinary tract in the male, and the numerous types of bladder-neck obstructions occurring in women, have not been sufficiently emphasized by urologists and are usually neglected by the general profession. Recent investigations on the neurogenic bladder are most enlightening, as they point out the necessity of a careful urological study and envisage the clinical indications of medical treatment—the administration of acetyl b-methylcholin, and that of surgical intervention, resection of the presacral nerves.

In considering congenital obstruction of the lower urinary tract in the male, it has been observed

that a greater number of these lesions are encountered on the autopsy table than are diagnosed during life. And, until greater coöperation is obtained on the part of the pediatrician and the internist, this condition will continue to exist. The "pot-bellied" child, possessing chronic pyuria and in whom the kidneys are enlarged, calls for a urological investigation. There is no doubt that congenital valves of the posterior urethra and its accompanying hypertrophied verumontanus cause back pressure, resulting in hydroureter and hydronephrosis. However, I share the opinion of others that in a certain number of cases the accompanying megalo ureter and hydronephrosis exist as part of the congenital anomaly, are present at birth, and sometimes require separate treatment. I feel that fibrosis of the vesical-neck occurs more frequently in children than is generally recognized. I recall a child in whom diagnosis of this condition was made at the age of seven. Treatment was refused and he returned ten years later suffering from repeated attacks of difficult urination, culminating in acute retention, and he was relieved by transurethral resection of the obstructing median bar. We observed an interesting case of acute urinary retention due to a stone in the prostatic urethra, and this patient was relieved by perineal section, preceded by cystotomy.

There are numerous pathological conditions causing obstruction of the bladder neck in the female. We are prone to underestimate the frequency of obstructive lesions in the female bladder neck. A number of these, consisting of cysts, polypi, tumors, and strictures, particularly when they are situated on the urethral side of the vesical neck, are best seen with the water-dilating type of cysto-urethroscope. It is well to employ this instrument as these lesions are sometimes overlooked with the open air urethroscope. I recall an interesting case of complete urinary retention in a woman due to an enormous hematocele, secondary to a necrosing carcinoma of the uterus. Bladder function was reestablished with drainage of the hematocele by a stab wound in the cul-de-sac. We have seen a number of cases of retention resulting from stricture formation of the deep urethra due to radiation therapy for malignant pelvic growths. Rational treatment of the various obstructive lesions is based on the character and extent of the lesion. In certain types of papillomatous growths of the vesical neck, which recur after repeated fulguration, resection of the tumor mass by means of cutting current through the open bladder is our treatment of choice, and has been followed by cure in a selected number of cases.

The differential diagnosis between the neurogenic bladder and other obstructive lesions of the bladder neck calls for a careful examination, including a neurological examination, as well as a complete urological study, comprising cystoscopy, cystometry, etc. The characteristic cystoscopic picture of the neurogenic bladder, as seen in *tabes dorsalis*, has long been recognized. Koll was among the first to describe these findings and in 1911 he called attention to the ureteral orifice rigidity (condition similar to the Argyl-Robertson

pupil), the hypertrophy of the interureteric ligament and the fine trebeculations usually located in the lateral portion of the first and second bladder zones.

But, until recent years, our knowledge of the more precise nerve supply and physiology of the bladder was sadly deficient, and while the standard textbooks dealt independently with this subject, it remained for the French anatomists to conclude investigations which led to the application of surgical measures for the relief of certain nervous lesions affecting the bladder. In 1930 Pieri applied neurectomy for the treatment of incurable, painful, tubercular cystitis, and in more recent years Learmonth, Foulds, Van Duzen, and Cheetham, have extended its use to the various types of neurogenic bladder, pointing out its indications and contraindications. The extensive studies of Young and Wesson, Van Duzen and Looney, Trabucco, Dragonis, and others on the anatomical structure and physiology of the bladder have been most useful. The cystometric studies of Rose, Redewell, and of Lewis and Langworthy, enabled us to diagnose more accurately disturbances of the motor pathways of the nervous system supplying the bladder.

In dealing with the neurogenic bladder, a rational form of therapy should be used for the different lesions due to the various disturbances of vesical function. For the treatment of the hypofunctioning external sphincter, cold baths, plastic operation, etc., are advised. For hypofunction of the trigone muscle in which the detrusor action is normal adrenalin is used in order to stimulate the sympathetic nerves. In hyperfunction of the trigone with weakened detrusor muscles, presacral neurectomy is employed. In this condition, Learmonth has justly pointed out that the parasympathetic nervous innervation acts as a brake on vesical contraction and resection of these nerves releases the brake. An analysis of the results obtained by presacral neurectomy seem to point out that it is indicated in a selected group of cases of sympathetic parasympathetic unbalance, spasms of the internal sphincter and incurable painful lesions of the bladder.

The discovery, and the use of the choline derivatives for stimulation of the parasympathetic nerve supply of the bladder are most interesting. On the administration of 2.5 mg. hypodermically, one notes flushing of the face, sweating, salivation, increased pulse, fall in blood pressure, increased peristalsis, etc.; in other words, the phenomenon produced by parasympathetic stimulation, accompanied by vasodilatation. In using this drug in the treatment of neurogenic bladder, one finds that it had a favorable action in decreasing residual urine in patients with neurogenic dysfunction. We have observed favorable results from the administration of this drug, noting that it acted by stimulation of the parasympathetic nerve fibres, increasing the tone of the detrusor muscle, resulting in improved emptying of the bladder.

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ORIGINAL ARTICLES

BIRTH INJURIES TO BLADDER AND BOWEL *

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EARLIEST mention of vesicovaginal fistulae probably occurred in the Ebers Papyrus. Hippocrates (460-377 B. C.) spoke of the involuntary discharge of urine following childbirth, but made no mention of its cause. Guillemeau, in the sixteenth century, first attempted surgical union of complete tear, while Van Roonhuysen (1672) probably made the first surgical attempt to close a vesicovaginal fistula. Certainly these major birth injuries to the bladder and bowel have been recognized for a long time, long before any attention was paid to birth traumata of lesser degree. Intervening centuries have seen gradual additions to both prevention and remedy. The development of cesarean section, forceps, version and more significantly perhaps, prenatal care, are today important factors in preventing these parturitional accidents.

CLASSIFICATION OF BIRTH INJURIES TO BLADDER AND BOWEL

These may be conveniently divided into the major and minor, depending on amount of damage; thus:

1. *Major*.—Extensive tearing or avulsion of either bladder or bowel.

(a) Vesicovaginal fistula or other damage to the urinary tract sufficient to cause diversion of the urinary stream.

(b) Complete tear of the perineum (third degree), *i. e.*, lacerations involving the anal sphincter and/or rectum, resulting in fecal incontinence.

2. *Minor*.—The lesser injuries to the bladder and bowel fall into two groups, the immediate and remote. Among the former (immediate) are acute hemorrhoids; fissures and bladder paralysis. More important, however, are the remote sequelae, which include cystocele, rectocele, urinary incontinence (muscle paralysis) hemorrhoids, etc.

PREDISPOSING FACTORS

While the cause is obviously trauma, usually resulting from disproportion between the birth canal and fetus, certain predisposing factors should be recognized. These may be classified as follows:

Intrinsic.—Including underdevelopment and anomalies of generative tract, abnormal pelvis, large baby, malpresentation, tetanic contractions, distended bladder, etc.

Extrinsic.—Forced labor (pituitrin or other uterine stimulants). Operative manipulations (both necessary and unnecessary).

By recognizing these factors and instituting or planning proper treatment, serious damage is generally prevented. Certainly the incidence of serious

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